ecom instruments

mobile experts

Lite-Ex LED 30

Bedienungsanleitung
Operating Instructions
Notice d'utilisation
Gebruiksaanwijzing
Istruzioni per l'uso
Instrucciones de uso
Manual de instruções
Bruksanvisning

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Note:
The current operating instructions, EC Declaration of Conformity and the Ex-certificate are available for download from the relevant product page under ***www.ecom-ex.com***, or alternatively they can be requested directly from the manufacturer.

1. Introduction

Easy to operate, the Lite-Ex LED 30 is a compact and robust LED torch, making it ideal for inspection lighting within Ex-hazardous areas classified as either Zone 2, 1 and 0 as well as 22 and 21 according to 1999/92/EC (ATEX 137).

2. Safety Advice

This operating manual contains information and safety recommendations which must be complied with in order to guarantee safe functioning of the unit under conditions described. Non compliance with this information and recommendations can have dangerous consequences or infringe regulations.

Please read these operating instructions very carefully before using the unit !

In case of any doubt (e.g. due to translation and/or printing errors) the original German language version should be referred to.

3. Faults and Damage

If there is any reason to suspect that the safety of the unit has been affected then it must be immediately withdrawn from use and precautionary measures taken in order to prevent any further use of in the Ex-hazardous area. It is recommended that the equipment be then sent back to the manufacturers for testing.

For example, the safety of the unit could be endangered when:

- External damage to the housing.
- Exposure to excessive loads.
- Incorrect storage of the unit.
- Damage sustained in transit.
- Correct certification is illegible.

- Functionality errors occur.
- The permitted limitations are exceeded.

4. Safety Regulations

4.1 General regulations

Any person using the unit must observe the standard safety regulations and read the certificate to prevent incorrect operation or abuse of the unit.

The following safety regulations must be complied with:

- The unit must not be opened within the Ex-hazardous area.
- Batteries (see technical data) must only be changed outside the Ex-hazardous area.
- Spare batteries must not be taken into the Ex-hazardous area.
- Only the ”type approved” batteries as listed in these operating instructions may be used.
- The lens head and switch part of the unit are permanently fixed and cannot be opened. Further, to do so should not be attempted.
- Only those accessories approved by ecom instruments GmbH may be used.
- Special care should be taken when opening and closing the base cap (for access to the battery compartment) not to damage the sealing ring.
- The unit is to be taken out of service with immediate effect should the torch sealing ring become damaged.
- The maximum allowable environmental temperatures are not to be exceeded.

4.2 Special conditions for use in areas of Zone 0 or 21

1. The Lite-Ex LED 30 is only certified and permitted for used in Zone 0 or 21 providing it is secured to the user with the provided lanyard/wrist strap.
2. The torch unit should be prevented from being dropped.
3. The torch unit must not be left anywhere or stored in Zones 0 or 21.

4.3 Special conditions in dusty Ex-areas

1. After each change of batteries, the torch must be blown out or internally cleaned with a suitable device.
2. The sealing ring must be checked for any deterioration or damage.

5. Ex-Data

EC Certificate of Conformity No.:
ZELM 02 ATEX 0104

Ex-Designation:

II 1 G EEx ia IIC T4

II 2 D T90°C IP 52

Approved for Zone 2, 1and 0; equipment group II, gas group IIC;
explosive gases, vapours or fog, temperature class T4.
Approved for Zone 22 and 21; equipment group II, explosive dusts; T90°C

6. Technical Data

Ambient operating temperature Ta:	-20°C ... +50°C
Storage temperature:	-20°C ... +60°C
Batteries / power supply:	3 x LR1 as per IEC

(see table of approved battery types)

Table of approved battery types

Manufacturer	*Type*
Duracell	Alkaline MN9100
Varta	Electronics 4001
Eveready Battery Company, Inc.	Energizer E90

Battery life: approx. 80 h (continuous use)
Dimensions: 140 x 26 mm (l x ø)
Weight: approx. 160g (with batteries)

EC-Designation: CE 0102
Light source:
Type: Gallium-Nitrit-LED (NSPW500BS)
Life expectancy: 100.000 operating hours

7. Use and Application / Operating Instructions

Before use, please read these operating instructions very carefully in order to familiarise yourself with your Lite-Ex LED 30. For you own safety and information, please read the following instructions.

7.1 Commissioning

In order to be able to use the torch in the Ex-hazardous area, you must first check that the base cap is tightly fastened and that the safety screw is securely and completely fitted. After checking these points the torch can be used in the Ex-hazardous areas
– operation is by pressing the switch.
The torch is supplied with factory fitted batteries.

7.2 Battery Replacement

When the brightness is no longer satisfactory and the batteries are to be replaced, it is strongly recommended that all 3 batteries should be replaced as a set. When replacing the batteries ensure that only type-approved batteries are used (see table of type-approved batteries in section 6. Technical details).

PLEASE NOTE:

The batteries must only be changed outside of the Ex-hazardous area.

The use of any other type of batteries is strictly forbidden in that it will invalidate the Ex-data certification.

To change the batteries, first remove the safety screw – using a suitable screwdriver. The base cap can now be removed - by unscrewing in an anticlockwise direction.

The batteries can now be removed.

Before fitting new batteries ensure that the contacts of the new batteries and those in the torch are clean. After the batteries have been inserted, refit the base cap and secure with the safety screw.

Please check that the sealing ring has not become damaged when opening and closing the torch
(ref. special conditions see paragraph 4.3).

8. Repairs

Repair work is subject to the nationally valid regulations and directives. We therefore recommend that such work be performed by ecom instruments GmbH, Germany, as all repairs must be examined to ensure functional safety.

9. Cleaning, Maintenance and storage

- Only use a suitable cloth or sponge to clean the unit. Do not use solvents or abrasive cleaning agents to clean the unit.
- The batteries should be taken out of the unit if it is to be stored for a long time.
- The storage temperature should be within the permitted ranged of -20°C to +60°C.

10. Disposal

Old electrical equipment and „historic“ old electrical equipment from ecom instruments GmbH will be disposal obligation and disposed of at no cost in accordance with the EC Directive 2002/96/EC and the German Electrical and Electronic Equipment law of 16/03/2005. The costs of the transport of the equipment to ecom instruments GmbH are borne by the sender.

11. Guarantee and Liability

Under the general terms and conditions of business, ecom instruments GmbH offers a two-year warranty for function and materials on this product when used under the specified operating and maintenance conditions. Batteries, LED/Lamps and working parts are considered consumable parts and are not covered under the warranty.

This warranty does not extend to products that have been used improperly, altered, neglected, damaged by accident or subjected to abnormal operating conditions or improper handling.

In the event of a warranty claim, the faulty device should be sent in. We reserve the right to readjust, repair or replace the unit.

The above warranty terms represent the sole rights of the purchaser to compensation and apply exclusively and in place of all other contractual or statutory warranty obligations. ecom instruments GmbH does not accept liability for specific, direct, indirect, incidental or consequential damages or losses, including the loss of data, regardless of whether they are caused by breach of warranty, lawful or unlawful actions, actions in good faith or other actions.

If in certain countries the restriction of statutory warranty and the exclusion or restriction of incidental or consequential damages is unlawful, then it may be possible that the above restrictions and exclusions do not apply for all purchasers. If any clause in these warran-

ty terms should be found to be invalid or unenforceable by a competent court, then such a judgement shall not affect the validity or enforceability of any other clause contained in these warranty terms.

12. EC-Type Examination Certificate

Prüf- und Zertifizierungsstelle

ZELM Ex

(1) **EC-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – **Directive 94/9/EC**

(3) EC-TYPE-EXAMINATION CERTIFICATE Number:

ZELM 02 ATEX 0104

(4) Equipment: **LED Torch type Lite-Ex LED 30**

(5) Manufacturer: **ecom instruments GmbH**

(6) Address: **D-97999 Assamstadt**

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0820 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report ZELM Ex 0620217154.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014: 1997+A1+A2 **EN 50 020: 1994** **EN 50 281-1-1: 1998**
EN 50 284: 1999 **EN 1127-1: 1997**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this Certificate.

(12) The marking of the equipment shall include the following:

Ex II 1 G EEx ia IIC T4
II 2 D T 90°C IP52

Zertifizierungsstelle **ZELM Ex** Braunschweig, November 15, 2002

Dipl.-Ing. Harald Zelm

Sheet 1/2

EC-type-examination Certificates without signature and stamp are not valid. The certificates may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM Ex.
In the case of dispute, the German text shall prevail.

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Prüf- und Zertifizierungsstelle

ZELM Ex

(13) # SCHEDULE

(14) **EC-TYPE-EXAMINATION CERTIFICATE ZELM 02 ATEX 0104**

(15) Description of equipment

The LED Torch type Lite-EX LED 30 is intended for the hand-held use in the explosive atmosphere of category 1 G or 2 D respectively.

The equipment consists of the housing made from several brass parts, three LEDs in parallel and the push-button switch. The power supply is made by three LR1 type battery cells.

Electrical data

Supply circuit — three built-in batteries type LR1 EEx ia IIC
The internal circuit is intrinsically safe.

The maximum permissible ambient temperature is – 20 °C to + 50 °C

The maximum case temperature is + 90 °C

References:

The instruction manual has to be considered.
For applications of this LED torch in category 1 G or 2 D areas the back-side hand sling must be used.
To open the housing in the explosive atmosphere is not permitted.

(16) Report No.

ZELM Ex 0620217154

(17) Special conditions for safe use

not applicable

(18) Essential Health and Safety Requirements

In general met by standards. For category 2 D applications the degree of protection IP 52 has been accepted against the standard, due to the achievement of equivalent safety by the type of protection Intrinsic Safety considering the hand-held properties of the equipment.

Zertifizierungsstelle **ZELM Ex** — Braunschweig, November 15, 2002

Dipl.-Ing. Harald Zelm

Sheet 2/2

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Prüf- und Zertifizierungsstelle

1st addition

(Addition in accordance with EC Directive 94/9 Appendix III Item 6)

to the EC-Type Examination Certificate

ZELM 02 ATEX 0104

Device: **LED flashlight type Lite-Ex LED 30**

Manufact urer: **ecom instruments GmbH**

Address: **D-97959 Assamstadt**

Description of the addition

The 1st addition to the EC-type examination certificate relates specifically to the internal structure and switch without significant changes to the lamp as a whole.

All other technical specifications, identifying marks and the instructions mentioned in the EC-type examination certificate remain unchanged and also apply to this 1st addition.

Test report no.

ZELM Ex 0940512414

Special conditions not

applicable

Essential health and safety requirements

The essential health and safety requirements are met by virtue of conformity with the standards listed in the EC-type examination certificate.

ZELM Ex Testing
and Certification Body

Braunschweig, 09.08.2005

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The EC-type-examination certificate may only be circulated without alteration.
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